

Nurse Retention in the Pediatric Cardiac Intensive Care Unit
DNP Final Project

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By

Melanie Hlahol RN, BSN, MSN
Graduate Program in Nursing

The Ohio State University

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DNP Project Committee:

Chair: Dr. Tondi Harrison PhD, RN, FAAN

Dr. Rosie Zeno DNP, APRN-CNP

Dr. Joyce Zurmehly PhD, DNP, RN

Abstract

New graduate retention within intensive care units is startlingly low. The purpose of this DNP project was to evaluate current retention programs from the perspective of current new nurses, probe responses to elicit specific underlying issues and concerns, and develop a retention plan targeted specifically for the new graduate nurses in this pediatric ICU. A focus group was created (n=6) consisting of new graduate nurses who have been working on the unit for 2 years or less. Participants responded to open-ended questions. We found that perceived lack of support and inconsistency were major themes related to why new graduate retention on this unit was low. The project director met with a retention task force to develop a specialized retention plan for the unit based on these themes. Three areas of focus that were developed for the retention plan included educational improvements, peer to peer support, and clinical leader improvement opportunities. This project provided an in-depth analysis on why retention rates for new graduate nurses are low within a specific ICU area and allowed for a specialized retention plan to be developed to improve new graduate retention on this unit in the future.

Keywords: new graduate retention, pediatric ICU, retention plan

Section One: Nature of the Problem

Introduction

New graduate nurse retention in the intensive care unit (ICU) setting is critical as it allows nurses to gain complex skills, thus becoming experts in their field and enabling these nurses to mentor new nurses coming into practice. However, the percentage of nurses who stay in ICU positions is startlingly low (about two-thirds) (Stechmiller, 2002). Moreover, nurse turnover rates in the United States are as high as 18-20% (Labrague et al, 2020). This turnover costs hospitals thousands of dollars, as they are investing time in these new graduate nurses through extensive orientation processes. In one study, it was estimated that one RN departure can cost the organization anywhere from \$10,000 to \$88,000, which is a large portion of revenue for hospitals (Duffield et al, 2014). When nurses leave, the hospital needs to hire and train new nurses who may or may not stay on the unit. The effects of turnover within the ICU will directly impact all members of the healthcare system from the patient to the organization as a whole. Turnover negatively effects patient care (Bae, S. et al, 2010) and can lead to an increase in adverse patient events because experienced nurses are lost (Van Bogaert et al., 2014). In addition, nurse satisfaction is reduced (Shields, 2001). Financing within the hospital can also be affected as the hospital invests money and time for new staff orientation, and high rates of nurse turnover affects productivity and performance at the organizational level (Labrague et al., 2020). In summary, high rates of nurse turnover can threaten the integrity of the healthcare system if not rectified. According to Myrhen et al. (2013), if the turnover problem is not addressed, the turnover rate for nurses working in the ICU will continue to increase and emotional exhaustion will occur.

Although nursing turnover as whole is high within the ICU setting, up to 33.5% of new nurse graduates working within the ICU experience burnout and leave their position within the first two years of practice (Wright et al, 2019). This level of turnover can also be seen within a large midwestern hospital in a specialized ICU area. These rates occur even with considerable amounts of training and orientation processes that hospitals use to transition these nurses into practice. For example, nurse residency programs are used to help new graduate nurses feel welcome and feel a sense of community within the hospital with the hope that this sense of community will increase their drive to perform within their unit and decrease turnover (Blegen et al, 2017). However, even with extensive orientation processes and residency programs, high turnover rates continue. Working in critical care unit may not be suitable for all nurses who start their careers here. However, internal / organizational assessment, nursing characteristics, unit culture, and other factors need to be examined in order to determine what can be done to increase the number of new graduate nurses that remain within the ICU setting if this is in fact the patient population they wish to care for (Blegen et al, 2017).

Current Unit Situation

At a large, regional children's hospital, current retention plans focus on retaining new graduate nurses. For example, as a way to help increase retention, within the hospital, the new graduate nurses are required to participate in a year-long, evidence-based nurse residency program. In this program, nurses from each ICU come together for 4 hours once per month and participate in various activities and simulations. The simulations consist of situations that may happen within the ICU setting such as a code event and allows the members of the residency program to participate in a safe place where they can practice drawing up medications, CPR, and documenting code activities. The activities within the nurse residency program are team bonding

experiences such as Two Truths and a Lie where each person says two truths and one lie about themselves, and the rest of the group has to guess which statement was the lie. These meetings and activities open up dialogue to allow the new graduate nurses to hear experiences from other nurses and bond with these nurses who work within their same institution and may be feeling similarly about the workplace depending on where they are in the orientation process. A disadvantage to this program, however, is that the peers who work on the unit are not involved in this residency program and do not know what occurs within these meetings as the information is not shared with the unit specifically. This does not help to facilitate team building with established unit nurses and only benefits those who are participating in residency at that time.

Furthermore, the new graduate nurses that start on this specialized ICU unit go through an extensive 20-week orientation process that was also evidence based. This process consists of one-on-one feedback from a preceptor (and a secondary preceptor for back-up) who work with that orientee for the entirety of their orientation. The orientee works with the preceptor in caring for the preceptor's typical patient load for each of their three, 12 hour shifts per week. These efforts, including the evidence-based residency and extensive orientation program, were created with the intent to increase retention for new graduate nurses within the ICU, however, retention rates are still low despite these efforts.

In 2019, a unit survey was sent out to all nurses working on this unit to evaluate the intent to leave the unit and reasons behind this intent. The survey was initiated by a group of nurses who recognized that retention rates within the ICU were low, however, were unsure why. The survey was sent out from nurses on the unit who recognized that the unit's turnover was a problem and that those nurses who were participating in the extensive new graduate orientation program were not experiencing expected outcomes. The survey included a variety of questions

in multiple choice format with an option to further explain answers via short answer and separated the answers based on years of experience. Examples of questions include “have you ever considered leaving the unit and, if you have ever worked in another facility, what things did the unit do for staff retention that you appreciated? The answers provided by new graduate nurses included answers such as displeased with overall experience and culture and the intent to leave was high. Of the 40 total nurse respondents, 83% stated that they had deliberated changing their career or leaving the nursing profession entirely. Looking even deeper, ten of these respondents had worked on the unit for ≤ 2 years, with 70% of respondents in this category stating they deliberated leaving the unit.

Results from this survey drove the intent to develop a plan that would decrease the intent to leave from new graduate nurses by the project director as this was the first in depth survey that was created for this unit specifically. The project director obtained these results by contacting the nurse who had created the survey, as she had stated that they were interested in the results, however, did not know how to continue forward after receiving them. The project director then discussed the initial survey results with the unit manager within the specialized/unique ICU, and it was determined that a tailored retention plan focused on the new graduate nurses within this unit needed to be developed that encompasses their values and what they believe will improve their working conditions on the unit.

Purpose

The purpose of this DNP project was to evaluate current retention programs from the perspective of current new nurses, probe responses to elicit specific underlying issues and concerns, and develop a retention plan targeted specifically for the new graduate nurses in this pediatric ICU. Our overall goal was to improve new graduate nurse transition to practice within

our pediatric ICU setting. The proposal was based on evidence that shows that new graduate nurses within the ICU frequently leave their units within the first few years of working, thus impacting their unit and the hospital system as a whole (Missen et al, 2014). The project obtained data from new graduate nurses to identify reasons for high turnover rates, then used the data collected to evaluate and improve the current retention programming within this specific ICU. The project was conducted within a local, magnet status children's hospital in a major Midwestern city. The unit this project took place in is a 20-bed unit, currently staffed with 60 nurses. It included new graduate nurses who have been working within the ICU for 2 years or less.

Section Two: Review of the Literature

Clinical Practice Problem

The clinical practice problem is: Why are nursing turnover rates among new graduate nurses in the ICU setting within a large children's hospital system so high following the implementation of extensive orientation and new graduate nurse residency programs? Our literature search was guided by the following PICOT question: In new graduate nurses working within the ICU, what factors contribute to retention for nurses who have worked for two years or less within the ICU compared to other units?

Summary of Evidence for Factors Contributing to Nurse Retention

The search terms used to find evidence regarding this project were: Nurse retention, Nurse Retention in the ICU, New Graduate Nurse Retention, and Retention Programs. Terms that were more specific such as "pediatric nurse retention rates" yielded no results and were deleted.

CINAHL, PubMed, and Cochrane were used as databases for the search. Additional criteria were also used such as limiting the search to the past 10 years. However, 2 seminal articles were used from 2006 and 2008, as they were relevant to this topic. PubMed yielded the most articles (n =897), and pertinent citations within the resultant articles were also used, expanding the amount of literature that was accessible for the literature review. Several articles were excluded as they contained search relevant search terms, but the abstracts were not pertinent to this project.

From the 57 articles identified in PubMed or CINAHL that were applicable to the literature review and included full text articles, 6 were removed, as they were duplicates. Of the remaining 51 articles, the abstracts were reviewed for relevant information to the project. Based on the abstracts of each article, an additional 23 articles were removed as they were irrelevant to the project. Four articles were excluded as they related to retention but not within the ICU and could not relate to the PICOT question. Finally, three additional articles were excluded, as the full text version could not be located. This resulted in a total of 21 articles pertinent as evidence for the project. Most articles were targeted to new nurses; however, some were targeted to nurses of all experience levels yet were still pertinent towards the critical appraisal. Furthermore, some of the articles were not specifically ICU focused but they focused on new graduate nurses and were still applicable to the proposed project. These articles are identified in the reference section at the end of this document.

Critical Appraisal of Evidence

The rapid changes in healthcare require nurses who are willing to grow as healthcare continues to evolve. This encourages nurses who start their career within the ICU to remain in the ICU setting for many years, so that they can continue to learn new skills and develop in their

chosen profession. If ICU nurses become burned out within their first year, they are likely to leave the profession and not return (Park et al, 2010).

Breu and colleagues (2014) demonstrated that retention rates are influenced by many factors including feeling supported from leadership and positive unit culture. The survey utilized a sliding scale to assess nurses' workplace satisfaction within several units, including the ICU, and their intention to leave. The data showed that nurses' intent to leave is higher if their workplace satisfaction is low. Additionally, in a cross-sectional survey focusing solely on nurses within the ICU, additional factors such as positive leadership and authentic recognition increased ICU nurse retention rates. This study was one of the few studies that focused in depth on nursing leadership and the effect it can play on retention rates within the ICU.

A cross-sectional study completed by Leiter and colleagues (2006), although an older study, provided vital information in regard to nursing retention. The study showed that nurses who are able to see certain professional practice domains in effect on their unit, such as adequate resources available and efficient or supportive leadership within the unit, were less likely to leave the unit due to feeling a greater sense of accomplishment. This is applicable to new graduate nurses as they need to feel supported in order to increase retention rates and if these factors are not fulfilled within their unit, their job satisfaction will be decreased.

A quantitative study performed by Laschinger in 2012 explained useful information on predictors that may influence retention among nurses who have been working within the ICU for 2 years or less. Participants (N = 342) were asked to respond to a survey by rating the factors that influenced their intent to stay on the unit, and if they were satisfied with their current job. Nurses reported high levels of burnout, and the view that their orientation process did not fully meet their needs. Although orientation and residency programs are created for new graduate

nurses help them to feel supported on their unit, there is still a high level of turnover for new graduate nurses. (Laschinger, 2012). In a study by Eckerson in 2018, new nurse residency programs were found to increase nurse satisfaction. However, the previous study performed by Laschinger demonstrates that new graduate nurses need additional interventions to support them in order to increase their retention rates on the unit. Interventions that support work engagement and preventative strategies that focus on new graduate health and well-being were recommended. A larger cross-sectional study (N = 549) found that nearly half of participants had the intention to quit within their first year of working as a nurse due to a decrease in satisfaction on their unit (Labrague et al, 2020). This study demonstrated that lack of feeling supported (i.e. lack of unit engagement in measures to increase coping skills of nurses that help them to deal with the stress of working within an ICU) as a new graduate nurse leads to a decrease in job satisfaction and therefore, a higher intent to leave the unit. This study supports the need for a retention plan focused on new graduate nurses in order to decrease their intent to leave within a few years' time.

In a prospective, longitudinal study, 160 new graduate nurses were surveyed at 3 different points during their first 3 years of working as a nurse. The survey asked the nurses about the perceptions of self-image and expectations when they first started on the unit and then asked about their intent to leave and how these expectations changed at two other points during their first 3 years on the unit. (Chenevert et al, 2016). The study showed that as nurses' progress during their first few years of working, those who had more favorable work environments, for example, those which enhance professional self-image on the unit and are involved in work environments which focus on nurse involvement, were less likely to leave. This highlights how important positive work environments are for new graduate nurses to improve their retention

rates. In a similar study conducted by Tyndall and colleagues (2019), support (i.e., an increased amount of communication specifically from leadership to the new graduates) and development of peer to supervisor relationships where the peer feels supported by the supervisor, were major factors on retention rates within the first two years of nursing. New graduate nurses felt that as the orientation process ended, so did the support that was shown on the unit. New graduate nurses need to feel supported after their orientation process is complete in order to retain these nurses and allow them to continue to gain critical nursing skills.

Summary of Evidence

The studies found during the critical appraisal of literature were primarily level of evidence 4-7. Although there were limited studies that focused solely on the ICU setting, many articles were still applicable to retention rates and how certain factors influence nurses who have worked for 2 years or less. These studies included a variety of systematic reviews, secondary data analysis, and comparative reviews.

From conducting this literature review, many things were learned that drove the proposed DNP project. It was seen that programs, such as new graduate nurse residency programs, are currently in place with the goal to improve new graduate retention rates within ICUs. However, it was also seen that although these retention plans are in place, retention rates are still low. New graduate nurses favor a positive work environment (i.e., strong communication from leadership and feeling empowered within the unit to speak up when they feel is necessary) and can experience a high level of burnout very quickly during their nursing career if this environment is not provided to them (Laschinger, 2012). Consensus of current programs found within the literature for new graduate nurses in the ICU to increase retention include: evidence-based new nurse residency programs and an extensive orientation process. The new graduate nurses within

the specific ICU at this institution participate in a new graduate nurse residency program and extensive orientation, however, still report high intent to leave. This disconnect propelled the idea to develop a focused, unit-based retention plan.

Theoretical Basis

The theoretical model used for this project is the Nursing Worklife Model. This model explains how a positive unit and management culture can affect how nurses perform in the workplace, improving their perceptions of the unit and making them want to continue working on the unit (Leiter and Laschinger, 2006). The model was developed to show the relationship between positive work environments and nurse retention. If nurses have positive work environments and are satisfied with their job, then patient care is directly improved (Manojlovich and Laschinger, 2006). The model focuses on five domains including: “staff nurse participation in hospital affairs; use of a nursing model as the basis for care on a nursing unit; nurse manager ability, leadership and support; staffing and resource adequacy; and collegial nurse–physician relations” (Manojlovich and Laschinger, 2006, p. 257). Nurse manager ability, leadership, and support is the pillar of the model and refers to the qualities that a nurse manager needs in order to create a healthy work environment for their staff (i.e., being authentic with staff and transformational). Nurse manager ability drives the other domains. Without it, the other four domains will be less effective and will not adequately contribute to nursing satisfaction. (Manojlovich and Laschinger, 2006). Staff nurse participation in hospital affairs refers to the idea that nursing leadership can increase nursing satisfaction and reduce turnover by encouraging staff members to participate in hospital projects as this allows staff nurses to influence what occurs within their organization (Manojlovich and Laschinger, 2006). Using nursing models as the basis of care allows units to provide setting-specific care to patients and thus, improve the

quality of care patients receive (Manojlvoch and Laschinger, 2006). Staffing and resource adequacy refers to having adequate resources and nursing members to staff the unit efficiently (Manojlvoch and Laschinger, 2006). Finally, collegial nurse-physician relations are an important component of nursing satisfaction and burnout. If nurse to physician communication is poor, then nurses are less satisfied with their work environment and have an increased risk of leaving the unit (Manojlvoch and Laschinger, 2006). Focusing on these five critical domains of nursing can affect the outcome of patient care as nursing satisfaction is directly correlated to how well they are able to provide care to their patients (Manojlvoch and Laschinger, 2006).

The Nursing Worklife Model fits into this institution's core values including patient and family centered care. This model focuses on nursing quality. If nursing staff feels that their institutions are fulfilling the five domains listed above, then they are more likely to stay on their unit and provide the best care to patients and their families. If these five domains are met adequately, nursing job satisfaction and job retention can be improved (Manojlvoch and Laschinger, 2006). Using this model as a framework helps focus on the characteristics that are needed within a unit in order to meet retention goals. The retention goals of this project from the project director are that turnover rates within the unit decrease and unit specific improvements can be made in order to help increase retention rates from new graduate nurses. The five domains can be assessed to ensure they are being fulfilled adequately on the unit. If they are not, issues can be identified, and a retention plan can be focused accordingly.

Recommendations for Practice Change

The practice change recommended is to develop a plan to improve new nurse retention tailored to the pediatric ICU. By identifying new graduate nurses' needs within this unit, a unit

specific plan can be developed to enhance the likelihood that they stay within the ICU setting at this institution.

Key stakeholders for this project are nurses and leadership in the ICU setting within the institution. The educators and professional development leaders are also key stakeholders as they help guide new graduate nurses during their first few years within the ICU. Nursing educators can identify nurses who would be valuable to the project. The staff nurses are critically important stakeholders and must have input into the retention plan in order for this project to be successful. Before beginning the project, it will be important to talk with the nurses about the plans and the ultimate end goal of creating a retention plan that will benefit them during their time working within the ICU setting.

Section Three: Methods

This project consisted of focus groups followed by the development of a retention plan by a small group led by the project director.

Focus Groups

An email was sent from the project director to all nurses who had worked within the specialized unit for two years or less from a list provided by the nurse manager of the unit. The number of nurses who fell into this category was 13. The email included information regarding what the project purpose was and what it would entail and invited the nurses to participate. At the beginning of the focus group, the project director reiterated what the proposed project would entail and the purpose of the focus group. It was then explained that the focus group discussion would be confidential, so the participants were able to speak freely and that the project director could not include any financial or scheduling stipulation in the retention plan, as she did not have control over those areas. The project director then began asking open-ended questions (See

Appendix B) to facilitate group discussion. The questions used to stimulate discussion were developed by the project director based on the literature, the Nursing Worklife Model, and the unit survey.

The meeting was recorded without video via Zoom, and the project director then transcribed the discussion. Names and identifiers were removed to allow the transcript to remain anonymous.

The focus group was structured and managed so it did not turn into a forum to complain about the unit without giving constructive ideas to help improve it. The project director conducted the focus groups in a manner that was nonjudgmental and provided an atmosphere in which all participants felt as if they could trust those participating in the focus group and were able to share their honest opinions on the questions that were asked (Stalmeijer et al, 2014). For example, the project director used strategies similar to this: “To curb a dominant participant, the following phrase is helpful: ‘There are a few people who wish to add to this point, we will come back to that idea if we have time,’ and to encourage a quiet participant: ‘Do you have anything you would like to add to on this topic?’” (Wong, 2008, p. 258).

Data from the focus groups were then analyzed using directed content analysis (Hsieh and Shannon, 2005) and common themes were identified. The transcription was analyzed by the project director and two other nurses in the unit who had 4 and 5 years of experience. The purpose of the project was discussed with these nurses and they were asked to read the transcript and highlight common themes they identified. The transcript and analysis of common themes were then sent to two participants within the focus group to validate accurate representation of the data.

Retention Plan Development

Based on the information gathered from the focus groups, a retention plan was created. The retention plan, focused on the specialized ICU, was created with representatives of all stakeholders in this project, including leadership, new nurses, peers from the unit, clinical leaders, and the project director. Other information, including the nursing theory used to develop factors that may need to be improved to increase retention rates on the unit, was used to develop a comprehensive plan to decrease turnover rates. We included financial considerations, based on input from senior leadership, and feasibility of methods needed to implement and sustain this retention plan. Part of the retention plan needed to include formation of a long-term retention task force to oversee the implementation of the retention plan, assess the effectiveness, and ensure sustainability. We decided that each team member the project director met with would comprise the task force in charge of overseeing the retention plan, and the peer team members who had a special interest in this project and were a part of development of the peer mentor portion of the retention plan would be critical members. Recommendations for the implementation of this plan in its entirety will be communicated to leadership and the staff governing council.

Utility/Feasibility

This project was feasible for this unit. There is institutional buy-in for this project and the manager and educators of the unit are aware of and supportive of its development. Further, this portion of the project does not require a large financial investment. The biggest barrier was obtaining volunteers to participate in the focus groups. Factors that could have contributed to challenges in the collection of data were time constraints related to scheduling focus groups and staff member's willingness to respond to the questions asked within the focus groups. Another

potential barrier in the future may be willingness of stakeholders and staff nurses to support and participate in the eventual plan for improving retention.

Project Evaluation

Conduct of the focus groups. The focus groups will be successful if we can obtain two focus groups consisting of 4-6 new graduate nurses working within the cardiac ICU at this institution who have worked on the unit for variable durations of time. The focus groups will also be considered successful if the groups are able to stay on track and share their thoughts on how to improve the unit environment to support retention.

The project will be considered successful if an adequate retention plan, defined as a retention plan that is targeted specifically for new graduate nurses within the specialized ICU at this institution, can be created from the ideas given throughout the focus groups. A plan will be considered a good plan if all stakeholders agree that it can be carried out, they are enthusiastic about the plan, and are supportive of how it can be carried out, both financially and practically.

Section Four: Findings

Of the 13 new graduate nurses, 6 were able to attend the focus group held via Zoom. Although the original intention was to hold two focus groups, the project director decided to hold one group based on the number of attendees and the demographics of the attendees. The focus group included both males and females. The experience level ranged from those who had just completed orientation to those who were exactly two years post-graduation, therefore including a large range of levels of work experience.

Focus Group Themes

After analyzing the focus group transcripts, two common themes were identified (see Appendix C).

Inconsistency. Inconsistency was defined as new graduate nurses receiving different levels of resources and information during and after their orientation to help them succeed moving forward on the unit. New graduate nurses felt that in orientation and following orientation, resources that were given to them were inconsistent and it would be helpful if there was more of a consistent path that was followed. For example, each shift some of the nurses received a packet describing common cardiac defects seen on the unit that would help them learn about their patient's disease process, while others did not. One member of the focus group stated:

We got like a packet with like the anatomy of each defects, and then like a lot of the repairs, which I think was helpful because then because we would see something I would get and we would look at it.

Another member then stated "That's helpful because I did not get anything. I never got any type of like a packet, or anything along those lines and I think that would be super, super helpful because it's just a good resource to have." The nurses felt that being given a resource to help them learn the intricate defects while in orientation would be helpful, and this dissemination of resources needed to be consistent from group to group.

Another example of inconsistency that was reported was that during the hospital-wide nurse residency program classes, some new graduate nurse groups were able to hear from nurses who had recently completed orientation and who were currently working in other ICU areas, however, others did not have that opportunity. The nurses within the focus group felt that hearing from more experienced nurses was helpful and was something that should be added to the orientation experience. A member of the focus group supported this statement by saying,

“We had that in residency. I think three new-ish nurses but like none were from our unit so maybe that would have been more helpful.”

Finally, another example reported within the focus group was that there was inconsistency with clinical leaders following the orientation process. For example, one member of the focus group stated that “we actually did have like a one month follow up thing with your clinical lead,” while another participant then said “Yeah, I didn't. I think some people did and some people didn't so it was very, like, probably based on your clin. leader.” This disconnect was further validated when another participant said:

No, um, I was actually talking to XXX, and I think XXX as well, and they were telling me that they had that experience and I was just kind of waiting around to see if I would get an email or something...but no I never had it.

The focus group strongly believed that meeting with the clinical leaders following orientation was imperative to success as a nurse on the unit. Furthermore, the new graduate nurses who participated within the focus group felt that inconsistency was a major reason why retention rates were decreased within this particular unit.

Lack of Support. The second major theme that was identified was perceived lack of support. For example, those who participated within the focus group stated that following orientation, they were unsure who to communicate with regarding feedback on how they were doing. During orientation, the nurses met with educators and their preceptors on how they were performing every two weeks. Following orientation, these meetings do not occur. Some of the participants stated that their clinical leaders reached out to them and discussed how things were going one month out of orientation, while others stated they were unsure of who their clinical leader even was and what their role was within the unit. A participant stated “I feel like the clin.

leads could like follow up with people because I remember like I didn't really have anyone in particular that like followed up with me to see how I was doing.” Another member who was able to have a meeting with their clinical leader after one month stated that it occurred when:

you're about one month out and they ask how is it going, and then this was kind of nice they had like a paper with some notes from I think it was all charge nurses, just kind of like, You're doing a great job, little quick notes like that and that was nice just this like kind of a confidence boost when it's kind of a hard time one month out.

Those who did not have these types of meetings verified that this would have increased the feeling of support following the orientation process, and the nurses were looking for a way to improve this within the unit.

Another example of feeling unsupported was that the new graduate nurses felt like they did not have peer support once their orientation process was completed. Although some of the nurses felt that they could reach out to their preceptors once they were out of orientation, others did not have that connection and felt as if they were bothering the preceptors, especially if the former preceptors were already responsible for other trainees. The nurses stated that a peer who had at least 2-3 years of nursing experience on the unit and was willing to help the new nurses navigate on how to deal with difficult situations that arise would help them feel more supported within the unit. A focus group participant stated:

having someone when you're like off on your own, but having someone you can go to and even just like vent, or just having someone who can tell you, like, hey you did the right thing or you're doing a good job would be helpful and I think some people do have that in their preceptor and like I feel like I can still go to XXX if I have any concerns or if

I'm like upset about something but now that she's precepting someone else I don't want to, you know, put all that burden on her.

The new graduate nurses felt that they did not have someone to turn to after orientation who could validate what they were feeling any certain day, and this was something that needed to be improved upon.

Finally, another reason the nurses stated they felt a lack of support from the unit is that they were unsure of how they could become more involved within the unit in order to give them a sense of community and the ability to form bonds with others. One nurse stated:

I actually recently didn't start knowing about different things until XXX started and she, you know, had all of the stuff from her old hospitals and so she would reach out to different people like hey I did this at my old hospital, do you have anything like that there and because I communicate with her and talk to her all the time, she would say like oh I'm doing this, this, and this and this is who I reached out to you so then I would be like, Oh, that's interesting. I want to do that as well. So that's the only reason, the only way I found out about different stuff.

This lack of knowledge about unit activities or committees for nurse involvement can decrease the feeling of support on the unit. If the new graduate nurses do not know how to and are not encouraged to get involved, they are less able to form strong peer relationships and may feel more alone on the unit.

Retention Plan Development

Following the analysis of the focus group transcript and after major themes were identified, the project director reached out to the stakeholders of the project to discuss the findings. These stakeholders included representatives from management, clinical leadership,

education, an Advanced Practice Nurse Practitioner from the medical team, and two nurses within the unit as peer representatives. During the initial meeting held via Zoom, the purpose of the project was presented, as well as what was found within the focus groups. This meeting was then followed by a general discussion of possible ideas that could be included in the retention plan, recognizing that further, more detailed meetings would be held. Following this meeting, the project director then met individually with the primary stakeholder representatives to develop the proposed retention plan in specific areas of focus (e.g., discussion of issues related to peer support was discussed with peers from the unit). These stakeholder representatives were split based on areas identified to target specific interventions of the retention plan based on the areas identified at the initial stakeholder meeting:

- 1) Mentoring from Peers
- 2) Educational/Orientation Support (including ways to increase support with medical team)
- 3) Clinical Leader Support and Consistency

The retention plan can be seen in table format in Appendix D of this document.

Peer Mentoring

The first stakeholder representative meeting was held with two nurses who worked within the unit and were chosen because when they heard about this project, showed a strong interest in new graduate retention and wanted to be involved. During this meeting, it was decided that a peer mentorship program would be beneficial to improve the retention on the unit. When creating this mentorship program, multiple factors needed to be discussed. First, we needed to explicitly theorize as to how the peer mentor program is expected to increase retention. The group consensus was that the peer mentor program allows new graduate nurses to interact with

and ask questions of their peers without feeling guilty, with the hopes that the feeling of support will increase for these new nurses when they are practicing on their own during their first year post orientation. The peer representatives and project director felt that this was the best way to help the new graduate nurses feel supported on the unit, with the hopes that if they feel more supported, the retention rates will increase.

Second, peer representatives for the retention task force were chosen. We identified two nurses with a strong interest in nursing retention within the unit and were willing to assess the effectiveness of the plan moving forward. Third, we needed to decide who to invite to participate in the mentor program. We felt our target group is nurses who have been working on the unit for 2-4 years. The peer mentors will be trained guided by the strategies proposed by Andersen and Watkins (2018), who stated that the peer mentor and the mentee “need to be fully invested in the peer-mentor relationship and outline their learning needs.” By allowing the peer mentor and mentees to join on a volunteer basis, this objective can be better achieved. Role description and performance criteria were developed. The peer mentor will serve as a resource for new nurses and be available to answer questions via text or an in-person meetings for the first year following orientation. The mentor program will be individualized, and the additional time needed for this responsibility will be set on a peer-to-peer basis. The mentor and mentee will establish how frequently they would like to meet and can increase or decrease these meetings as mutually determined. The peers also recommended that the peer mentors receive financial compensation for their participation in the mentor program. The unit manager agreed that this could be added into the unit merit tool to incentivize nurses to participate as mentors. Fourth, we discussed how the new graduate nurses and peer mentors would be paired. We decided that, in order to allow new graduate nurses to form peer bonds with more experienced nurses they felt comfortable

with, they will be allowed to choose from a list of peer mentor participants and the number of mentees per mentor will be limited to one. If a mentee chooses a particular nurse, that nurse will be taken off the list of potential mentors as to not overwhelm the mentor and allow the mentor to give their undivided attention to the mentee.

This peer mentoring program aligns with the staffing and resource domain of the Nursing Worklife Model. The program allows participants to participate in a new resource that is available on the unit that allows them to feel included, supported, and a part of a team. This in turn may increase nursing satisfaction.

Education and Orientation

The project director then met with members from the education team to discuss findings and develop a plan. After reviewing the focus group results, we decided that creating an electronic and physical copy of the most common cardiac defects along with surgical considerations for each would be beneficial for new graduate nurses. The project director found pictures of common cardiac defects that the nurses may see on a day-to-day basis using members of the education team as a resource. These pictures were approved by the leadership team to verify that there was no conflict with copyright laws. These pictures were then put into an electronic template. With input from the medical and nursing team, surgical considerations unique to this unit and the specific defect were added to the template. After completion and approval of the template from the stakeholders, this template was tested by sending to members of the focus group and they were asked to use the template in their day-to-day care of patients. They were then asked in a follow up meeting at the conclusion of the pilot intervention how they felt about the template and if any improvements could be made before adding the template to the

cardiac care manual. The final version of the manual will be placed in the unit's SharePoint site and printed for use with future orientation groups.

Another aspect of the retention plan related to education was having a nursing panel be available during a unit education class that the new orientees are required to attend. The nursing panel will consist of nurses who have experience on the unit. The purpose of the panel is to allow the orientees an opportunity to ask any questions they may have and help to ease anxieties about starting on the unit following orientation.

Each component under the education portion of the retention plan aligns with the staffing and resources domain in the Nursing Worklife Model that explains that if nurses are provided with adequate resources to be successful on the unit, then they will be more satisfied with their work and stay on the unit for a longer period of time. These resources provide the new graduate nurses with the assets they need to succeed on the unit and feel confident in their work.

Clinical Leaders

The final key stakeholder meeting was with a member from the clinical lead team. The role of the clinical leader is to serve as a liaison between nurses and management. When discussing the findings from the focus groups with the clinical leader representative, it was found that there are some improvements to be made from the clinical leader team to ensure that all new graduates are feeling supported and are not feeling as if there are inconsistencies following orientation. After discussion, we decided that each nurse on the unit needs to be consistently assigned to a specific clinical leader. If there is a specific issue that arises with a nurse, the clinical leader is there to act as a support person for the nurse. They can direct them how best to handle the situation and increase the support the nurse feels on a day-to-day basis on the unit. We also decided that the nurse orientees would benefit from have the clinical leaders attend an

orientation class and serve on a discussion panel. By inviting the clinical leaders to serve on a panel, the new graduate has face-to-face time with their potential clinical leader to increase the amount of support given to the new graduate nurses. These pillars of the retention plan are very important as it allows new graduates to ease into the unit while knowing they have a team of leaders behind them as they begin their nursing career.

It was decided that meetings between the clinical lead and staff nurse need to become a consistent way of practice within the unit. As part of the retention plan, new graduate nurses and their clinical leads will meet at the 1-, 3-, and 6-month mark following the completion of orientation. A consistent group of open-ended questions from the clinical lead will be asked at each session to ensure that each nurse is discussing and receiving the same type of information regardless of who their clinical leader is. A standardized survey will also be sent to charge and resource nurses who work with these nurses on a day-to-day basis, asking for feedback on how they are doing. A spreadsheet was created and shared on the leadership website that marks when each meeting was held to ensure that no new graduate nurse goes without these imperative check-ins. The clinical leader representative will be in charge of monitoring this and ensuring that it is up to date. These check-ins allow for new graduate nurses to have face-to-face time with their clinical leader before their first yearly evaluation and gives them an opportunity to receive feedback on how they are doing, a topic that the nurses within the focus group felt was imperative to ensure success.

These two aspects of the nursing retention plan align with the leadership support domain of the Nursing Worklife Model. The clinical leaders are a part of the unit leadership team. The clinical leaders and new graduate nurse relationship is a very important relationship that needs to

be fostered to ensure that the new graduate nurses are successful on the unit and that they feel supported by the clinical leader and management team.

We also decided part of clinical leadership was encouraging staff nurse involvement in unit activities. Therefore, the project director created a list of committees with a description of each committee available on the unit along with who the contact person is for each committee. This list would be distributed to each new nurse at the completion of orientation. This intervention relates to the staff nurse participation in hospital affairs domain of the Nursing Worklife Model. An important piece of retention and ensuring nursing work satisfaction is providing opportunities for the staff nurse to become a part of hospital projects, thus potentially influencing decision making and resource allocation. The committee document is a resource that will encourage new graduates to become involved at a unit level at the same time as forming bonds with their peers through becoming active in committees on the unit.

Retention Task Force and Sustainability

After sharing the larger retention plan with the stakeholders, it was discussed that the complete retention plan will be implemented by the retention task force recruited by the project director. The retention task force consists of an overarching group including the nurse manager, educational leads, clinical leader, and peer nurses who participated in the individual stakeholder meetings with the project director. Two members of the task force were identified as the leaders of the group to ensure that the process continues. This task force will be in charge of ensuring that the retention plan continues to be implemented and that the plan is reevaluated in approximately one year, following the completion of a few new orientee groups to ensure that these changes are sustained and helping to improve new graduate retention on the unit. It was

discussed with the retention task force and the project director that these changes will begin with the new orientation group that will be starting in late July.

Evaluation and Next Steps

The purpose of this project was to identify reasons for low retention rates for new graduate nurses within a specialized ICU and create a retention plan to improve these factors, implementing and evaluating two interventions of the larger recommended plan. The primary outcomes of this project were identifying common themes reported by new nurses related to the lack of retention in a specialized ICU unit and identifying how to address these issues. There was institutional buy in from all stakeholders in regards to this project and they felt that this project was very useful for the unit moving forward. The stakeholders viewed the project in a positive light and agreed that the components were areas that needed improvement and were achievable. They were very interested to hear about the common themes that were analyzed from the focus groups and found the comments that were presented very interesting as well. During the individual meetings and discussions, the stakeholders stated that they were surprised with the results from the focus groups, as they believed that new graduate nurses left the unit for different reasons than what were described in the focus group. After showing the stakeholders the committee information and cardiac defect documents in the presentation, feedback was given that more surgical considerations needed to be added to each defect's picture. The project director took this feedback and implemented it into the cardiac defect document that was given to the focus group to evaluate.

The project director implemented two pieces of the retention plan (described above). The project director gave the newly developed committee manual and cardiac defect resources to the new nurses who participated in the focus groups and asked them to implement them as they

worked on the unit to see how feasible they were to use and any suggestions for revision they had. Subsequently, another meeting was held with the focus group participants to discuss their evaluation of the documents. The participants felt that these documents served an excellent purpose on the unit for helping new graduates excel in the workplace. They stated that “it really helped to bring the defects full circle and I liked being able to have everything in one place to go back and reference as needed.” Another participant stated, “I used the resource yesterday when admitting my post-operative patient and it really helped as a refresher before I received the patient.” The focus group stated that the defect reference document would be helpful for new graduates as when they are learning about cardiac defects and the pearls related to taking care of these patients. Participants stated that they believe this document will be helpful to all nurses moving forward. The focus group also appreciated the committee document that was created by the project director. A participant stated “it was nice to have all this information about the description of the committee along with a contact in each committee. This is something I have been looking for out of orientation in order to get involved on the unit.” Another focus group participant asked who would be in charge of updating this form, and it was explained that the clinical leader retention task force member would update this form as needed. All focus group participants felt that the documents and retention plan that was developed would be helpful for this unit moving forward to improve retention with new graduate nurses in the future in this specialized ICU.

Lessons Learned

During the implementation process of this project, some plans needed to be changed to meet staff needs. We originally intended to have two groups with different experience levels, however only six participants were able to participate within the project time frame, so only one

focus group was held. It is unknown if holding another focus group would lead to the development of more themes on why retention within the unit is low. However, we felt that adequate discussion was held that led to development of a feasible retention plan. Finding common themes from the focus groups and creating a plan for implementation went well. The themes led to identification of viable processes to develop and implement to improve retention. Furthermore, the stakeholders of the project were on board with the implementations the project director created and felt that these implementations would help to improve retention on the unit.

A potential limitation to the success of this project is the number of volunteers for the peer mentor portion of the plan. If there are not enough volunteers to mentor new graduate nurses, then this portion will not be executed properly. However, when discussing with the retention task force and other members of the unit, interest levels were high, and the project director felt that this portion will be executed successfully.

Section Five: Recommendations

Project Summary

Overall, this project had a favorable outcome for the unit within a large midwestern pediatric hospital. It was seen that support and consistency were two very important factors in regards to new graduate retention within the unit. If these themes are not addressed, then new graduate nurses will have a higher intent to leave the unit at an earlier time. The retention plan created addresses these issues and allows the unit to implement feasible methods to retain new graduate nurses.

Implications for Practice

The purpose of this project was to create ways to increase retention rates of new graduate nurses on a unit within a large midwestern hospital. This project was developed based on the

Nursing Worklife Model, a nursing theory that stresses the importance of multiple domains relating to nurse satisfaction and retention. This project allowed the project director to analyze nursing theories and base the project off the theory that was best suited to create practice changes on a unit. There were many aspects of the theory that were utilized within this project including participation in hospital affairs, staffing and resource domain, and the leadership domain. These domains were identified as problems within the focus groups and therefore, the retention plan was designed to improve these issues. All five domains listed were not included as the other factors were not identified as issues among those who participated in the focus group.

The results of this project align with many essentials related the DNP. One of these essentials is Essential I: Scientific Underpinnings for Practice. This essential states that the DNP graduate is able to “develop and evaluate new practice approaches based on nursing theories and theories from other disciplines” (AACN, 2008, p. 9). Another DNP essential that this project aligns with is DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes. This essential describes how the DNP graduate will be able to establish leadership skills and work to create interprofessional teams effectively (AACN, 2008, p. 14). This project allowed the project director to interact and collaborate with multiple members of the multidisciplinary leadership team to help improve the quality of the unit and the nurses who work there.

Identify Methods for Dissemination

The retention plan that is created would be presented to staff members of the governing body of the cardiac intensive care unit at this institution through a power point or poster presentation. A manuscript reporting the results from this project may be submitted for

publication at a later date to a journal such as *Critical Care Nurse* or *Intensive and Critical Care Nurse* as these journals align well with this project.

References

- Andersen, T., & Watkins, K. (2018). The Value of Peer Mentorship as an Educational Strategy in Nursing. *Journal of Nursing Education*, 57(4), 217–224.
<https://doi.org/10.3928/01484834-20180322-05>
- Bae, S., Mark, B., & Fried, B. (2010). Impact of nursing turnover on patient outcomes in hospitals. *JONS*, 42(1), 40-49.
- Blegen, M. A., Spector, N., Lynn, M. R., Barnsteiner, J., & Ulrich, B. T. (2017). Newly licensed RN retention. *JONA: The Journal of Nursing Administration*, 47(10), 508–514. doi: 10.1097/nna.0000000000000523
- Breau, M., & Rhéaume, A. (2014). The relationship between empowerment and work environment on job satisfaction, intent to leave, and quality of care among ICU nurses. *Dynamics*, 25(3), 16–24.
- Chênevert, D., Jourdain, G., & Vandenberghe, C. (2016). The role of high-involvement work practices and professional self-image in nursing recruits' turnover: A three-year prospective study. *International Journal of Nursing Studies*, 53, 73–84. <https://doi.org/10.1016/j.ijnurstu.2015.09.005>.
- Chuang CH, Tseng PC, Lin CY, Lin KH, Chen YY (2016). Burnout in the intensive care unit professionals: A systematic review. *Medicine (Baltimore)*. 2016 Dec;95(50):e5629. doi: 10.1097/MD.00000000000005629
- Duffield, C. et al. (2014). A comparative review of nurse turnover rates and costs across countries. *JAN*, 70(12), 2703-2712.
- Eckerson, C. (2018). The impact of nurse residency programs in the United States on improving retention and satisfaction of new nurse hires: An evidence-based literature review.

Elsevier, 8, 84-90.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis.

Qualitative Health Research, 15, 1277-1288.

Labrague, L. J., De los Santos, J. A. A., Falguera, C. C., Nwafor, C. E., Galabay, J. R.,

Rosales, R. A., & Firmo, C. N. (2020). Predictors of nurses' turnover intention at one and five years' time. *International Nursing Review*.

<https://doi.org/10.1111/inr.12581>

Laschinger, H. K. S. (2011). Job and career satisfaction and turnover intentions of newly graduated nurses. *Journal of Nursing Management*, 20(4), 472–484. doi:

10.1111/j.1365-2834.2011.01293.

Leiter M.P. & Laschinger H.K.S. (2006) Relationships of work and practice environment to professional burnout: testing a causal model. *Nursing Research* 55, 137–146.

Koppel, J., Deline, M., & Virkstis, K. (2017). A two pronged approach to keeping millennial nurses. *JONA*, 47, 597-598.

Manojlovich, M., & Laschinger, H. K. S. (2008). Application of the nursing worklife model to the ICU setting. *Critical Care Nursing Clinics of North America*, 20(4), 481–487. <https://doi.org/10.1016/j.ccell.2008.08.004>

Manojlovich, M., & Laschinger, H. K. S. (2007). The nursing worklife model: extending and refining a new theory. *Journal of Nursing Management*, 15, 256-263.

Missen K, McKenna L, Beauchamp A. (2014). Satisfaction of newly graduated nurses enrolled

in transition-to-practice programmes in their first year of employment: a systematic

review. *J Adv Nurs*. 2014 Nov;70(11):2419-33. doi: 10.1111/jan.12464.

Monroe, M., Morse, E., & Price, J. M. (2020). The relationship between critical care

work environment and professional quality of life. *American Journal of Critical*

Care, 29(2), 145–149. <https://doi.org/10.4037/ajcc2020406>

Myhren, H., Ekeberg, O., & Stokland, O. (2013). Job satisfaction and burnout among intensive

care unit nurses and physicians. *Critical care research and practice*, 2013, 786176.

<https://doi.org/10.1155/2013/786176>

Park, M., & Jones, C. (2010). A retention strategy for new graduate nurses. *JNSD*, 26, 142-149.

Stalmeijer, R., McNaughton, R., & Van Mook, W. (2014) Using focus groups in medical

research education: AMME guide No. 81. *Medical Teacher*, 36, 923-939.

Stechmiller, J. (2002). The nursing shortage in acute and critical care settings. *AACN*, 13(4),

577-584.

Shields, M. & Ward, M. (2001). Improving nursing retention in the national health service in

England: the impact on job satisfaction and the intention to quit. *JOHE*, 20(5),

677-701

The essentials of doctoral education for advanced nursing practice. (2006). *AACN*, 2-27.

Tyndall, D., Scott, E., Jones, L., & Cook, K. (2019). Changing new graduate nurse profiles and r

retention recommendations for nurse leaders. *JONA*, 49(2), 93-98.

Van Bogaert, P., Peremans, L., Van Heusden, D. *et al.* (2017).

Predictors of burnout, work engagement and nurse reported job outcomes and quality of care: a mixed method study. *BMC Nurs* 16, 5.

Vanderspank-Wright B, Lalonde M, Smith CA, Wong S, Bentz JA. (2019). New graduate nurse transition into the intensive care unit: qualitative insights from a longitudinal study-Part 1 *Res Theory Nurs Pract*, 33(4), 428-444.

Wong, P. (2008). Focus group discussion: a tool for health and medical research. *Singapore Medical Journal*, 49(3), 256-261.

Appendix A

Synthesis Table

Study	Author/Year	# Participants	Study Design/Level of Evidence	Influence on Retention	Major Finding to PICOT
Impact of nursing turnover on patient outcomes in hospitals	Bae, S., Mark, B., & Fried, B. (2010).	268 nursing units	Secondary Data Analysis Level 6	Explains how nurse retention impacts patient care	Used to develop background
Newly licensed RN retention	Blegen, M. A., Spector, N., Lynn, M. R., Barnsteiner, J., & Ulrich, B. T., 2017	1464	Secondary analysis of NCSBN data Level 6	Identification of retention rates factors	Identified factors that influence nurses who have worked for 1 year or less, transferable to ICU setting
The relationship between empowerment and work environment on job satisfaction, intent to leave, and quality of care among ICU nurses.	Breau, M., & Rhéaume, A., 2014	533	Cross-sectional Study Level 5	Identification of low retention rates	Factors that influence low retention rates in other countries, transferable to US ICU
The role of high-involvement work practices and professional self-image in nursing recruits' turnover: A three-year prospective study	Chênevert, D., Jourdain, G., & Vandenberghe, C., 2016	160	Prospective, longitudinal survey Level 4	Nurses intent to leave as they progress during their first 3 years as a nurse	Shows that as nurses progress after orientation, they feel less supported, shows the need for a retention plan that focuses past orientation

Burnout in the intensive care unit professionals: A systematic review	Chuang CH, Tseng PC, Lin CY, Lin KH, Chen YY (2016).	203 papers reviewed	Systematic Review (descriptive) Level 5	Identified burnout factors for nurses	Used to develop background
A comparative review of nurse turnover rates and costs across countries	Duffield, C. et al. 2014	n/a	Comparative Review Level 5	Compares costs of nursing turnover	Shows that US turnover leads to high hospital expenses, used as background info
Predictors of nurses' turnover intention at one and five years' time	Labrague, L. J., De los Santos, J. A. A., Falguera, C. C., Nwafor, C. E., Galabay, J. R., Rosales, R. A., & Firmo, C. N. 2020	549	Cross-sectional Study Level 5	Factors that influence turnover rates	Helps to determine questions to ask in focus groups
Job and career satisfaction and turnover intentions of newly graduated nurses	Laschinger, H. K. S. 2011	342	Cross-sectional Analysis Level 5	Shows what influences new graduate nurses and ways to retain them	Addresses barriers to an increase in retention rates to new graduate nurses
Relationships of work and practice environment to professional burnout: testing a causal model	Leiter M.P. & Laschinger H.K.S 2006	8,597	Cross-sectional Analysis Level 5	Explains how working environment influences retentions	Used for background information

A two pronged approach to keeping millennial nurses	Koppel, J., Deline, M., & Virkstis, K. 2017	n/a	Opinion of Authorities Level 7	Explains how millennial nurses are different and what factors increase their job satisfaction	The nurses who will be in the focus groups are millennials, helps to format focus group questions that are more relatable to them
Application of the nursing worklife model to the ICU setting.	Manojlovich, M., & Laschinger, H. K. S 2008	n/a	Opinion of Authorities Level 7	Explains nursing worklife model	Used as theoretical framework for project
The relationship between critical care work environment and professional quality of life.	Monroe, M., Morse, E., & Price, J. M., 2020	4 adult ICU units	Cross-sectional Analysis Level 5	Survey used to identify factors that can influence retention rates	Focuses on leadership and how good leadership on the unit influences retention, can be transferable to pediatrics
Satisfaction of newly graduated nurses enrolled in transition-to-practice programmes in their first year of employment: a systematic review.	Missen K McKenna L, Beauchamp A. ‘ (2014).	338 articles reviewed, 11 articles used	Systematic review (descriptive) Level 5	Identifies retention programs for new graduate nurses	Used as background info

Job satisfaction and burnout among intensive care unit nurses and physicians.	Mvhren H Ekeberg, O., & Stokland, O. 2013	145	Cross-sectional Analysis Level 5	Lists repercussions for nursing burnout and low retention rates	Used as background information
A retention strategy for new graduate nurses.	Park, M., & Jones, C 2010	99 articles reviewed	Systematic Review (descriptive) Level 5	Focuses on new graduate nurses	Helps to develop retention plan for CTICU
Changing new graduate nurse profiles and retention recommendations for nurse leaders	Tyndall, D., Scott, E., Jones, L., & Cook, K. 2019	1088 new graduate nurses from 2010 study	Secondary Data Analysis Level 6	Focuses on new graduate retention rates	Shows how important leadership role is to retain new graduate nurses, used to create focus group questions
The nursing shortage in acute and critical care settings	Stechmiller, J. 2002	n/a	Opinion of Authorities Level 7	Explains reasons behind nursing shortages in ICU settings	Used to develop background of problem

Improving nursing retention in the national health service in England: the impact on job satisfaction and the intention to quit	Shields, M. & Ward, M. 2001	91 nurses	Secondary Data Analysis Level 6	Explains how nursing retention can improve with nursing satisfaction	Applicable to US nurses as well, used as background information
Predictors of burnout, work engagement and nurse reported job outcomes and quality of care: a mixed method study	Van Rogaert, P. Peremans, I., Van Heusden, D. <i>et al</i> 2017	19	Mixed Method Study Level 5	Discusses factors that nursing burnout	Used as background information
New Graduate Nurse Transition Into the Intensive Care Unit: Qualitative Insights From a Longitudinal Study—Part 1	Wright, B et al. 2019	New graduate nurses from 2 ICUs in Canada, number has not been reported to maintain anonymity	Mixed Method, Longitudinal Study Level 5	Describes new graduate nurses experiences and reasons for turnover within the ICU	Shows that NGN have higher turnover rates within ICU setting
The impact of nurse residency programs in the United States on improving retention and satisfaction of new nurse hires: An evidence-based literature review	Eckerson, C. 2018	299 articles reviewed, 18 articles used	Systematic Review (descriptive) Level 5	Describes a current retention program in place in most institutions	Can compare and contrast between our institution and how our current retention programs are created

Appendix B

Focus Group Questions

- 1) Were you surprised with the survey results on retention in the unit?
- 2) How do you feel about working within the CTICU at NCH?
- 3) What do you feel has gone well while working on the unit?
- 4) What do you feel has not gone well while working on the unit?
- 5) What can be improved to help enhance your experience as a new grad on the unit?
 - a. What resources provided by the hospital helped your transition to practice?
 - b. What additional resources would be helpful?
- 6) How do you feel about the orientation you received?
 - a. How do you feel about your experience on the unit after orientation was completed?
- 7) What does feeling supported on the unit look like to you?
- 8) What do you feel could help to improve your level of support you feel on the unit?
- 9) What are your thoughts about why our retention rates are so low on the unit?
- 10) What are ways that you feel would help improve your intent to stay on the unit (realizing that salary and scheduling cannot be adjusted)?

Appendix C

Common Themes

- 1) Inconsistency- some of the new nurses received certain resources while others did not, these resources can be used to help new graduate nurses moving forward (needs to be consistent with each new graduate orientation group). Suggestions from the group:
 - a. Creating digital defect resource to give each orientee who starts on the unit
 - b. Having nurse come to class and talk with orientees about what the unit is like
 - c. Clin lead meetings following orientation
- 2) Support
 - a. Clinical leaders to play large role in support for nurses
 - b. New graduate nurses need to feel more supported on the unit right out of orientation. It seems like they are supported up until orientation is completed and then it depends on who your clinical leader/preceptor is if you have continuing support. Suggestions from the group:
 - i. Peer Mentorship program to increase the support new graduates feel, have someone to validate their feelings
 1. Newer nurses (nurses who have been on unit 2-3 years) so that new graduates have a point person to talk to

Appendix D

Retention Plan Table

Retention Plan Topic:	Clinical Leaders	Peers	Education
Interventions:	Consistently assign new graduate nurse clinical lead when they begin orientation	Peer Mentor Program	Cardiac Defect Manual
	Discussion panel in new graduate orientation class		Nursing discussion panel in new graduate orientation class
	Follow up meetings with clinical leads 1,3-, and 6-months following orientation to assess how new graduate is feeling		
	Unit Committee Guide		